UNITED STATES DEPARTMENT OF COMMERCE
Chief Information Officer
Washington, D.C. 20230

DEC 14 2004

MEMORANDUM FOR Chief Information Officers

FROM: Thomas N. Pyke, Jr.

SUBJECT: Enterprise Information Technology (IT) Architecture

The Clinger-Cohen Act of 1996 requires that the Chief Information Officer of an executive agency be responsible for "developing, maintaining, and facilitating the implementation of a sound and integrated information technology architecture." This Enterprise IT Architecture is an integral part of Commerce's IT capital planning and investment control process, which includes the Commerce Strategic Plan, Commerce and operating unit Strategic and Operational IT Plans, and IT investment business cases as well as IT investment review processes. The Commerce IT Review Board rates IT investments on compliance with operating unit, Departmental, and Federal Architectures. Your operating unit IT review processes must also address architectural governance.

As discussed at the December 2004 CIO Council meeting, we need to strengthen our IT architecture processes and products within the IT capital planning and investment control process, raising our architecture maturity model scores to at least a level 3. Per Office of Management and Budget recommendations, we need to do the following:

- Continue to develop our architecture transition strategy. This implies that we have clearly defined target architectures.
- Demonstrate the use of the Architecture in capital decision making
- Develop performance measures linked throughout all levels of the Architecture

The Architecture Advisory Group has prepared guidance to assist you in preparing your Architecture and in understanding how the Architecture will be evaluated. See attachment 1.

As noted above, the Architecture must be prepared within the context of the overall IT capital planning and investment process. Your Architecture should reference and build on the material provided in other planning documents. The purpose of the Strategic IT Plan is to describe in general terms how IT will be used to support the key program missions and goals defined in your organization's and the Department's Strategic Plans. The purpose of the Operational IT Plan is to provide a more detailed description of IT actions and investments planned in the near term and to support an investment analysis of these plans. Business cases describe Commerce's IT capital investment portfolio and form the foundation of the Operational IT Plan. These documents must

reflect the Architecture and architectural changes your organization plans to make and should be referenced from the Architecture. The Strategic IT Plan might be used to define a Target Architecture and a long-term Sequencing or Migration Plan, while the Operational IT Plan might detail the implementation steps currently planned. The Migration Plan must include specific schedules and funding streams. Attachment 2 addresses areas of focus for this year's Architecture submission.

OMB has asked for a plan of action and milestones for the completion and use of your Architecture. We will provide the format under separate cover when we receive it. Please also provide a self-assessment that estimates your maturity in architecture development using both Commerce's and OMB's maturity models, which have different focuses – the former on process, the latter on product. Both are identified in attachment 1. Use these models to guide the development of your plan of action and milestones, which must be designed to bring you to at least a level 3 maturity on both models by June 2005.

Using the Metis architecture modeling tool will help you portray complex relationships, ease the documentation effort, and help you ensure that architecture development is an ongoing, dynamic process. Please use the Department of Commerce Enterprise IT Architecture (EITA) Framework for describing your Architecture through Metis.

To communicate readily with non-technical personnel, in addition to the Metis models, provide a word processing document that explains your capital planning process and how the Architecture is used within that process, and describes the architecture models, targets, and migration plans at a high level. Provide a narrative to explain where you are in the process and any other contextual material that might be useful to readers and that might not be readily apparent from the Architecture as portrayed in Metis.

Submit your plan of action and milestones and maturity model assessments by January 17, 2005, and your revised Architecture by March 31, 2005. Send your submissions to Tom Pennington (tpennington@doc.gov), the Department's Chief Architect, and to Ira Grossman (ira.m.grossman@noaa.gov), Chair of the EITA Advisory Group,

Attachments

cc: Enterprise IT Architecture Advisory Group

Attachment 1

Enterprise IT Architecture Guidance

One challenge in working on Enterprise IT Architecture is developing a common understanding of what that term actually means. The Advisory Group has prepared guidance that describes and reflects the understanding that will be used to evaluate operating unit efforts. For the Department of Commerce, an Enterprise IT Architecture is defined as a process and framework that lead to the development, implementation, maintenance, and use of a "blueprint" that explains and guides how an organization's IT and information management elements work together to accomplish the mission of the organization. The blueprint must take into account the organization's business, performance measures, information, and work flows. It cannot be a set of technical decisions made in isolation of these mission elements.

The Advisory Group has prepared or referenced several pieces of guidance to assist you in your architecture efforts. They are located at: https://secure.cio.noaa.gov/hpcc/docita. The Group offers other assistance as well. Please see below.

Information Technology Architecture: What Is It, Why Should You Care, and How Do You Do One? This document is a "plain language" overview of the purpose of an IT Architecture and how one can be developed. Its objective is to assist both managers and technical personnel in having a shared understanding of the basics of the architecture process.

Department of Commerce Information Technology Architecture Elements Guidance List. This document supplements the overview above by providing more detailed "cookbook" descriptions of how to execute the steps toward an Architecture.

Evaluation Criteria for Meeting the Department of Commerce Information Technology Architecture Requirements. This document gives the evaluation criteria against which operating unit IT architecture efforts and status will be measured and against which individual IT Architectures will be evaluated. An IT Architecture Development Checklist and selected definitions are also provided. You should review the checklist before and after documenting your Architecture to ensure that you have considered all of the necessary elements.

Commerce IT Architecture Capability Maturity Model. This model provides a framework and structure to help guide you to improve the maturity of your IT architecture process over time.

OMB Enterprise Architecture Assessment Guidelines. This model provides a framework and structure to help guide you to improve the maturity of your IT architecture products over time. Follow the link to www.feapmo.gov.

Sample Enterprise IT Architecture Documents. Many people would like to see examples of what other organizations have done. You will need a userid and password to access this secure section of the Architecture Web site. Contact Tom Pennington at 202-482-5899 or Ira Grossman

at 301-713-3345 x 140, who can provide the necessary information as well as guide you to examples that are germane to your efforts.

Consultations. The Advisory Group offers "personal" consultation. Each DOC operating unit is different. Each Enterprise IT Architecture will exhibit special characteristics, and Commerce's architecture requirement contains the flexibility to allow organizations to use differing approaches to reflect these characteristics. The Advisory Group is available to review your plans for revising and refining your Architecture to ensure in advance that the Architecture will generally meet the Department's guidance and will lead to successful and useful architecture tools. The Advisory Group is also available to give advice on any other aspect of your architecture efforts that may be causing difficulty or uncertainty.

Except for the Evaluation Criteria and the Architecture Capability Maturity Models, none of the guidance is mandatory. You are not required to use any specific approach or produce specific sets of documentation, although some form of documentation is required. You must decide what elements apply to your enterprise and what format of documentation will best suit your needs as a tool to guide your strategic and operational IT activities and to conduct IT capital planning and investment analyses.

Attachment 2

Goals for FY 2005 Enterprise IT Architecture: The attachment provides a list of key goals for the FY 2005 architecture submission. Use these to supplement the guidance provided above.

For the FY 2005 IT Architecture submissions, the following areas should be of special concentration. These recommendations are based on OMB's assessment of Commerce's Architecture, the overall results of the prior years' assessments, and areas of focus Government-wide.

- Continue to develop your architecture transition strategy. This implies that you have clearly defined target architectures.

- Demonstrate the use of the Architecture in capital decision making. Link to the Strategic Plans, Strategic and Operational IT Plans, IT business cases, and IT Capital Planning and Investment processes, identifying how the Architecture is used and integrates with and supports the other efforts. **Provide concrete examples of how the Architecture has been useful to you. For instance, the Architecture may have allowed you to identify and eliminate duplicate systems.**

- Develop performance measures linked throughout all levels of the Architecture.

- Provide a detailed governance structure for compliance with the Architecture in investment review, procurement, and system implementation, as well as for maintenance of the Architecture itself.

- Strengthen integration of IT security throughout the Architecture.

- Align with the Federal Enterprise Architecture (FEA). This should include the following:

    - Identification of performance measures following the Performance Reference Model.
    - A complete linkage to the Business Reference Model for all functional areas within the operating unit (including administrative and support functions).
    - First level breakdown of functions relating to the Service Component Reference Model.
    - Operating Unit Technical Reference Model (TRM) and/or linkage to the FEA TRM.
    - Use of the Data Reference Model when it is released by the Office of Management and Budget.

- Link to the Government-wide e-Government initiatives including existing or planned interfaces to them for delivering operating unit information and/or services.

- Link to software initiatives identified through SmartBuy.

- Include IPv6 and directory services in your target architecture, Standards Profile, and migration plans. You may also link to the Commerce Standards Profile.